

Work Order ID 83275

83275

Page 1

April-16-12 1:38:35 PM

Item ID: D3391-023
Revision ID:
Item Name: Mid Tube Assembly

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Start Date: 16/04/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 30/04/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/16 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3391	I
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100

0.00

100

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Cut tube to finish length as per Dwg D3391

2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

3-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

4-Remove .030" from Fwd indexing Ridge as per Dwg D3391

5-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

6-Deburr

7-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

***DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG

8-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (10 holes) as per Dwg D3391

9-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

DO NOT OPEN 2 MOST FWD WEARPLATE HOLES

DC 12/04/20

DC 12/04/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Cust Item ID:
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Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	10-Open .375" holes to .438" ***do not open fwd saddle holes***			DC 12/64/23					
	11-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)								
	12- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021								
	13- Using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.								
	14- Locating from two fwd wearplate holes in D3391-023 drill remaining 6 wearplte holes in D3391-021 using DT8937								
	15- Open 12 wearplate holes in D3391-021 to 0.297" dia.								
	16-Deburr and blow out all chips from inside tube, scribe batch # in D3391-023 at aft end.								

DC 12/64/24

110
110
QC
Quality Control

QC5- Inspect part completeness to step on W/O 0.00
Memo 0.00

Scribe/24

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NS1

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Stop

NS2

Start Date: 16/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 30/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

0.00

Hand Finishing

216 12-4-25

130

QC7-Inspect Chemical Conversion Coat

0.00

130

QC

Memo

0.00

Quality Control

SAD 12-05-01

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***

QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00

140

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

~~1~~ Open float bag holes as per dwg
~~2~~ C'sink float bag holes as per dwg
~~3~~ Prepare tube for welding
 4-Bond web in place as per Dwg D3391 & QSI 015.
 Adhere for 12 hours)
 A/R Sikaflex exp: ~~12/22/12~~ 13/01/04
 batch#: 121221
 NOTE:ENSURE WEB IS INSERTED IN AFT END OF TUBE

> 1 CF 12-4-26
 - DE 12/05/01

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

1 0 DE 12/05/03

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Skidtubes Skidtubes	Skidtubes Memo 1-Weld crossbolt spacer as per dwg D3391 & QSI 004 2-grind weld flush	0.00 0.00							
			A/R M120854		BE 12/05/03				
			CE/CC 12-5-3						
170 *170* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00							
			8/11/05/03						
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
			8/11/05/03						

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W/O:		WORK ORDER CHANGES					
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1

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Required Date: 30/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
185	Pressure Wash per QSI005 4.3	0.00							
185									
HandFinish	Memo	0.00							
Hand Finishing	AND REALODINE AS PER PAR09-043								
190	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
190									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 11:10 OVEN TEMPERATURE: 320 °F FINISH TIME: 11:40								
200	QC3- Inspect Part Finish	0.00							
200									
QC	Memo	0.00							
Quality Control									

76 12-5-8

1X

m-l
12/5/08

1X 11/2/09

m121134

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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1

Cust Item ID:

Required Date: 30/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

0.00

210

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

- ✓ 1- insert D3391-021 into D3391-23
- ✓ 2- insert T-pins into first and third fwd saddle holes
- ✓ 3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364
- ✓ 4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos
- ✓ 5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415
- ✓ 6- deburr, re-alodine and blow out chips
- ✓ 7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

1 x 4 12 11/05/09

220

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Memo

0.00

Quality Control

12 05 09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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1

Cust Item ID:

Required Date: 30/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date: Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
230	HandFinish	0.00				1 x	4		HL 12/05/09
Hand Finishing	Memo								
	✓ Install Inserts as per Dwg								
240	QC5- Inspect part completeness to step on W/O	0.00							
240	QC	0.00							
Quality Control	Memo								HL 12/05/09
250	Identify as per dwg & Stock Location: <u>W10</u>	0.00							
250	Packaging	0.00							
Packaging	Memo					1 x	4		HL 12/05/09

0.00 0412-742-043/1383157

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Revision ID:

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Item Name: Mid Tube Assembly

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1

Cust Item ID:

Required Date: 30/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC21- Final Inspection - Work Order Release

0.00

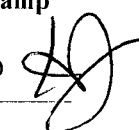
260

QC

Memo

0.00

Quality Control

12/5/10 
ME
12-05-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Picklist Print

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Page 1

Work Order ID: 83275

83275

Parent Item: D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 16/04/2012

Required Date: 30/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A05.10.20 New Issue KJ/EC
 IPP B06.02.10 ECN 773 dwg rev.D EC
 IPP C 07.03.20 rev F dwg EC
 IPP D 07.03.28 re-format EC
 IPP E 07.10.31 ecn 1053P EC
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
 Rev:J add in seq 140 expire date & b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100 *D2500-1-100* Skidtube Extrusion		Manufactured	No			100	Each	31.0000	1	1		12/04/20	
				<u>Location</u>				<u>Loc Qty</u>					
				HALL				31					
				50251				31					
D3391-021 *D3391-021* Fwd Tube Assembly		Manufactured	No			100	Each	0.0000	1	1		12/04/24	
D3389-1 *D3389-1* Web		Manufactured	No			140	Each	2.0000	1	1		12/05/07	
				<u>Location</u>				<u>Loc Qty</u>					
				B81098									
				LG				2					
				82220				2					

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D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 16/04/2012

Required Date: 30/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3681-1

Manufactured No

160

Each

46.0000

5

5

D3681-1

**

BE 12/5/03

Spacer

Location

Loc Qty

Loc Code

LG

36

80361

36

5

LG001

10

68958

2

69893

2

71845

2

74874

1

76004

1

77501

2

D3591-1

Manufactured No

210

Each

28.0000

2

2

D3591-1

**

M 12/05/10

Bushing

Location

Loc Qty

Loc Code

FP

27

80377

25

82027

2

V1

ST055

1

X1

57350

1

Dart Aerospace Ltd

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D3391-023

Start Date: 16/04/2012

Required Date: 30/04/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

230

Each

5,677.000

20

20

AI S4-1032-130

Insert

**

nl 2/05/09

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

2472

120807

472

120837

2000

ST282

3000

121269

3000

x70

Dart Aerospace Ltd

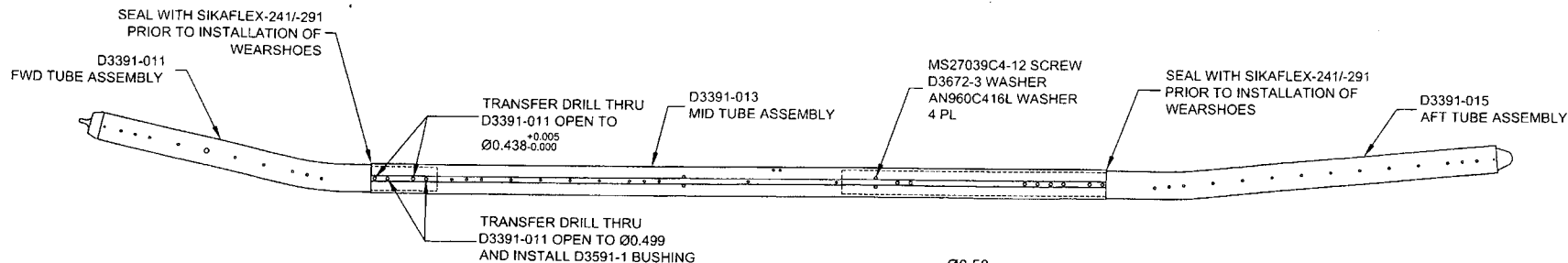
W/O:		WORK ORDER CHANGES					
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SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 83275 MLCJ
12/04/16

D3391-041 ASSEMBLY




RELEASED
2011-11-04
ECN#11-662

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL 0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL 0.50 HOLES FROM SADDLE TO D4095-043

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING, ZN C6 0.438 DIM WAS 4 PL. ADDED 0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING, ZN C6 0.438 DIM WAS 4 PL. ADDED 0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
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CHECKED		DRAWING NO.	REV.
MFG. APPR.		D3391	SHEET 1 OF 8
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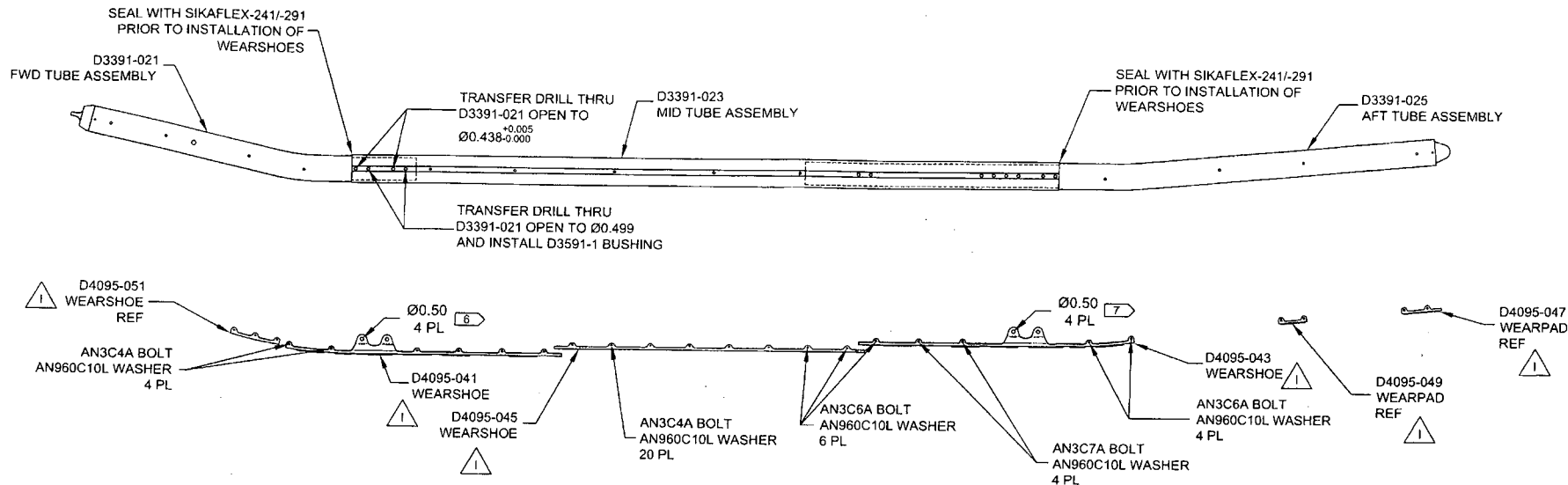
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

83275




**D3391-043 ASSEMBLY****D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
36	AN960C10L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
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- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

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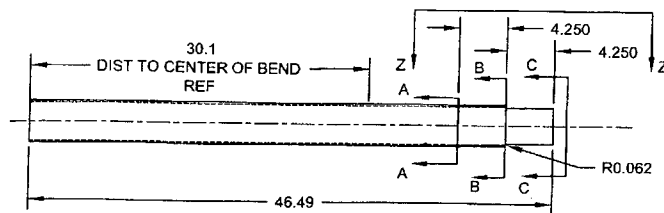
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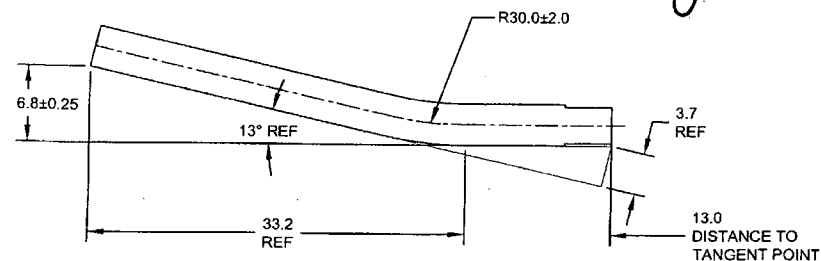
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

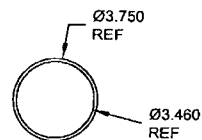
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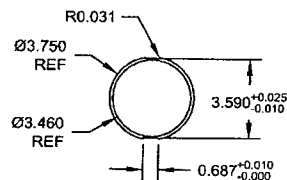
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



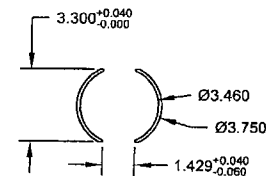
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



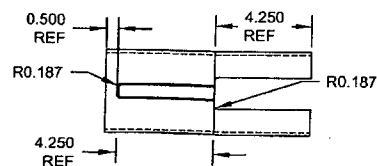
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

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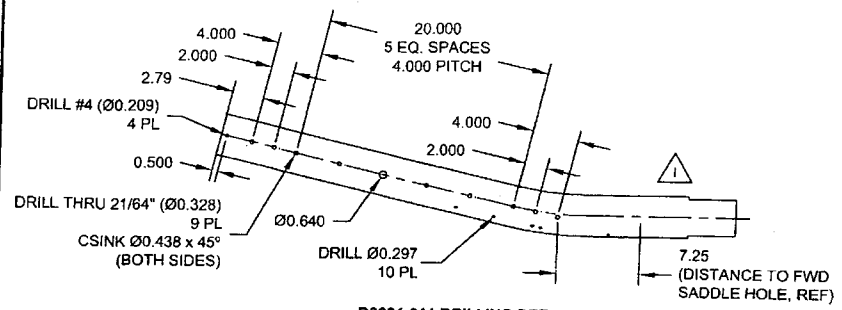
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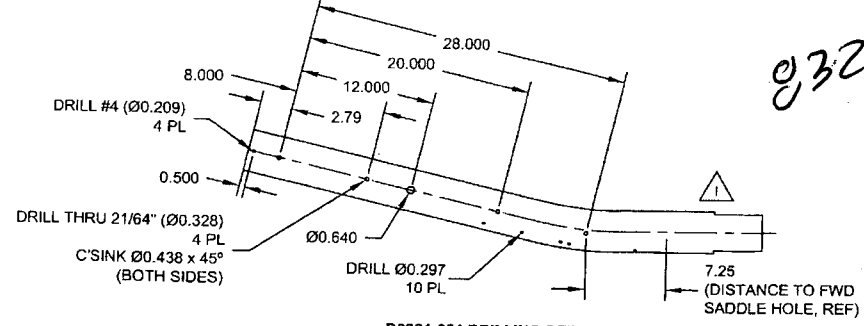
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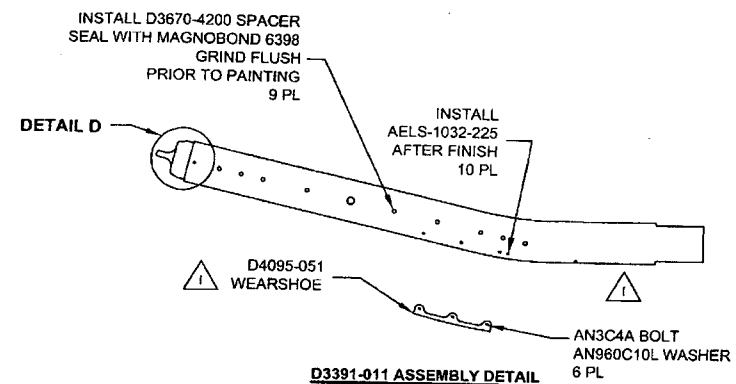
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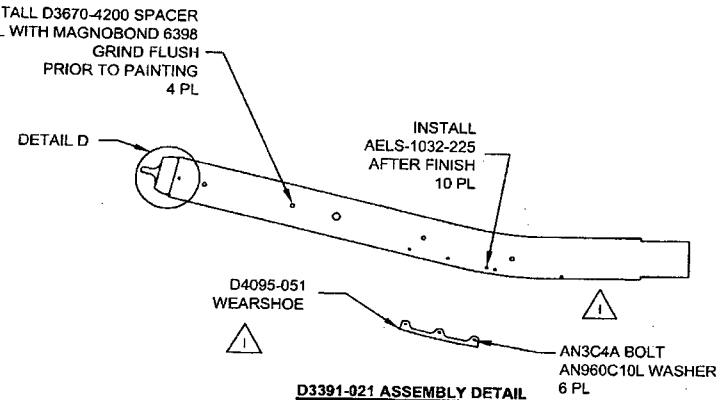
D3391-011 DRILLING DETAIL



D3391-021 DRILLING DETAIL



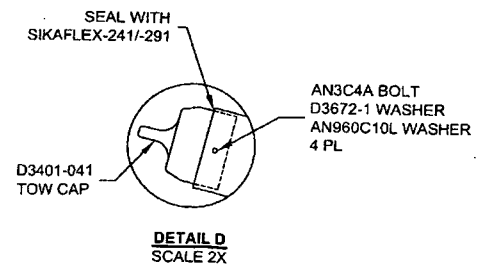
D3391-011 ASSEMBLY DETAIL



D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT



**DETAIL D
SCALE 2X**

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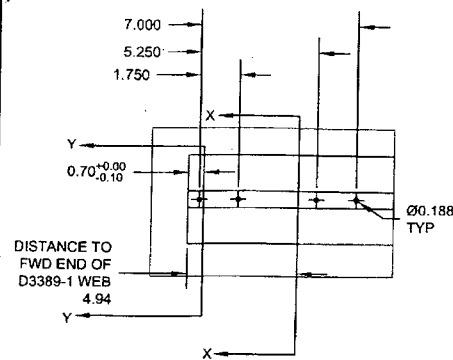
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

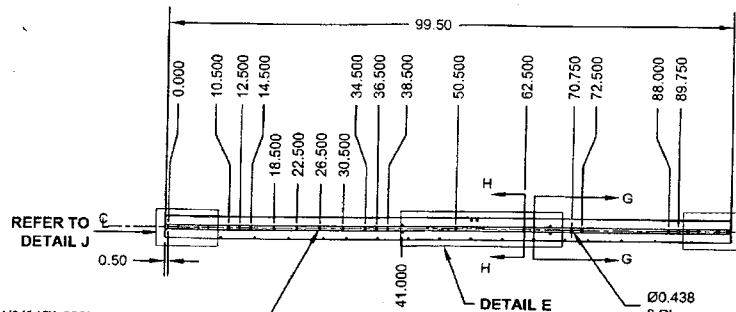
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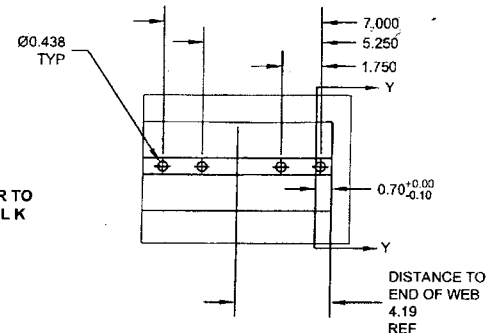


DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



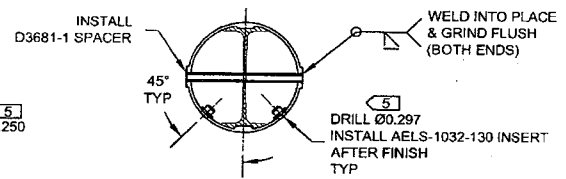
D3391-013 ASSEMBLY DETAIL



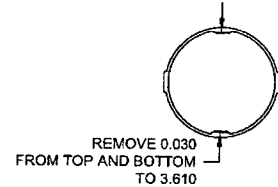
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SCALE 4X



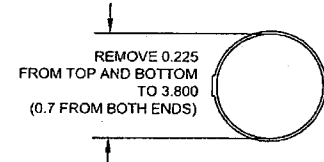
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SCALE 5X



SECTION H-H
SCALE 5X



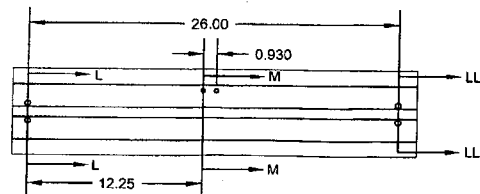
SECTION X-X
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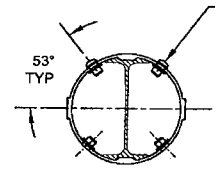
SECTION Y-Y
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

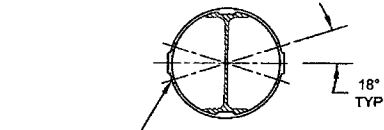
QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-426-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



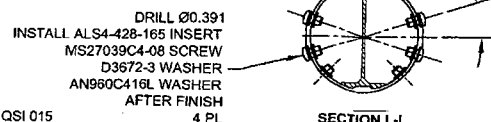
DETAIL E
SCALE NONE



SECTION M-M
SCALE 5X



SECTION LL-LL
SCALE 5X



SECTION L-L
SCALE 5X

D3391-013 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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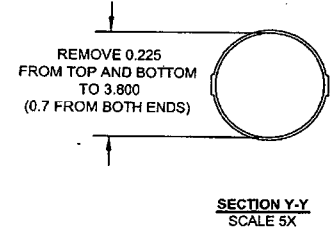
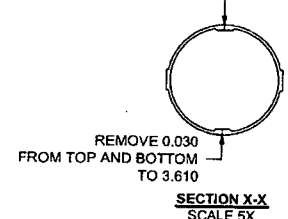
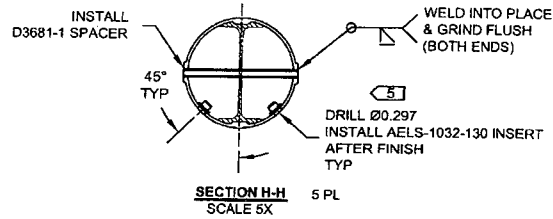
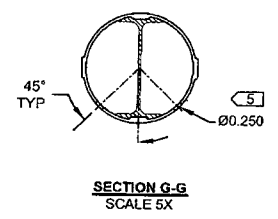
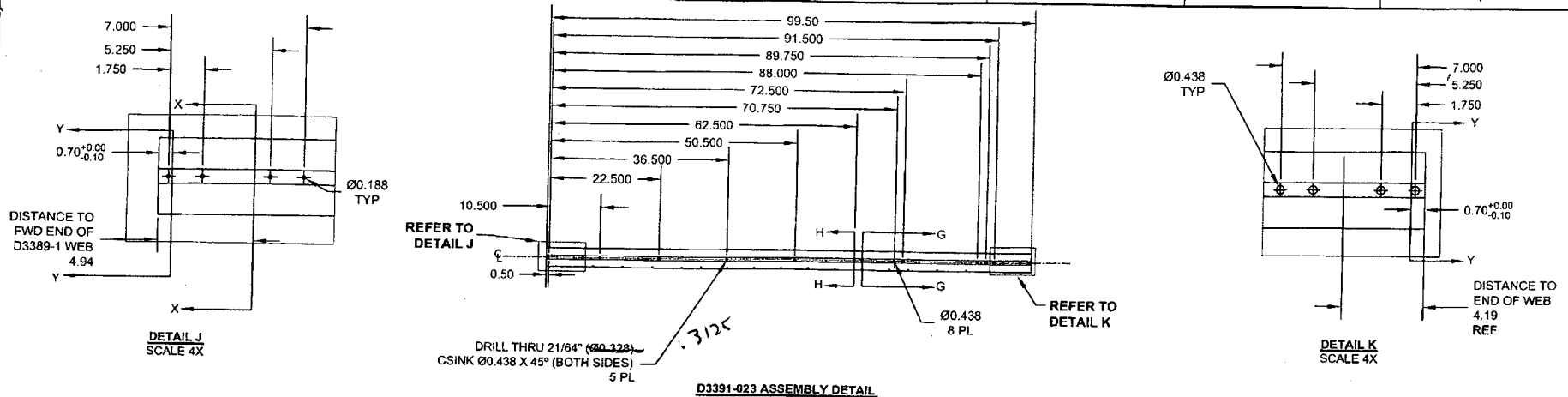
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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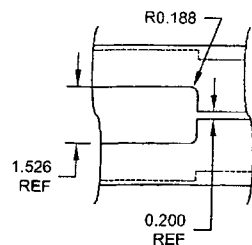
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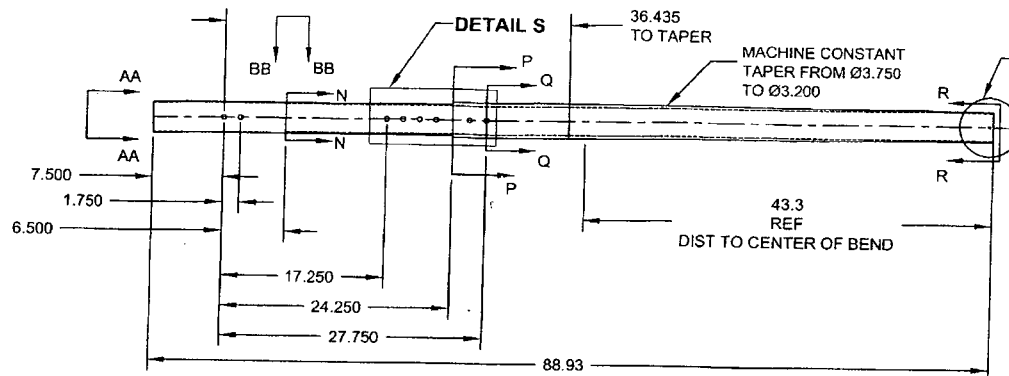
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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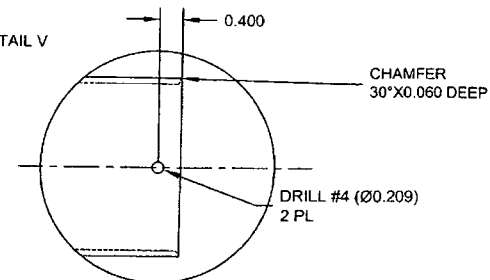
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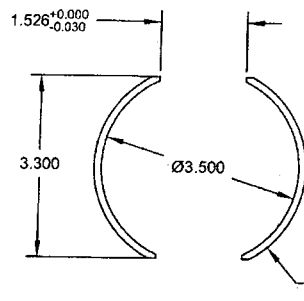
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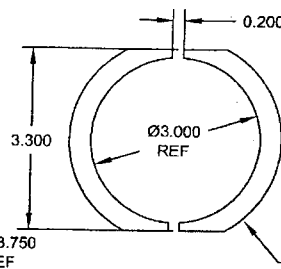
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



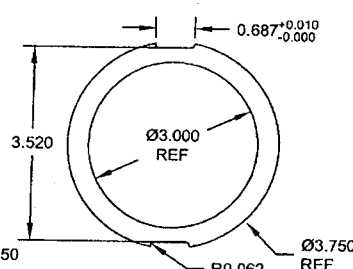
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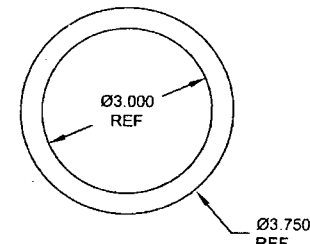
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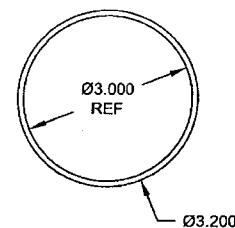
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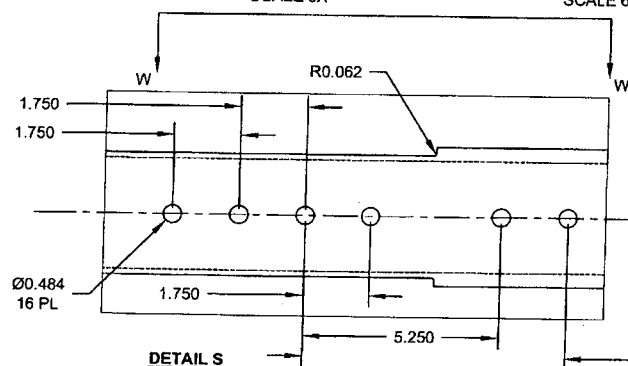
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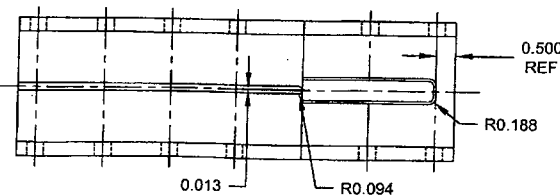
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SECTION R-R
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DETAIL S
SCALE 4X



VIEW W-W
SCALE 4X

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CHECKED		DRAWING NO.	REV.
MFG. APPR.		D3391	SHEET 7 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	11.10.13	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

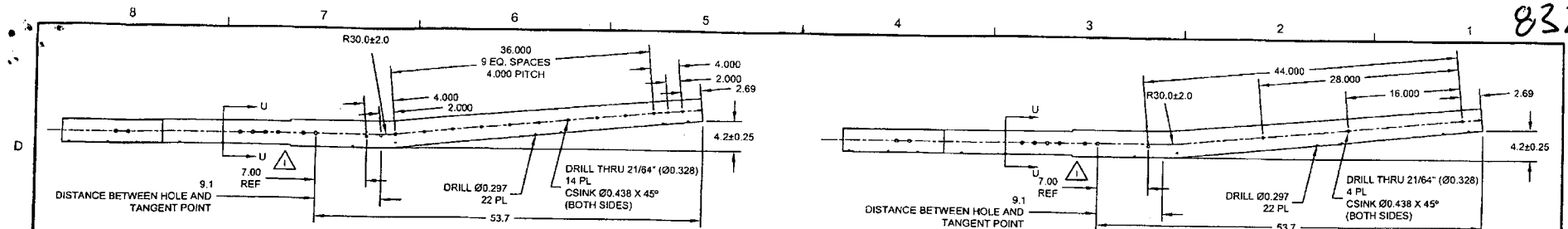
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

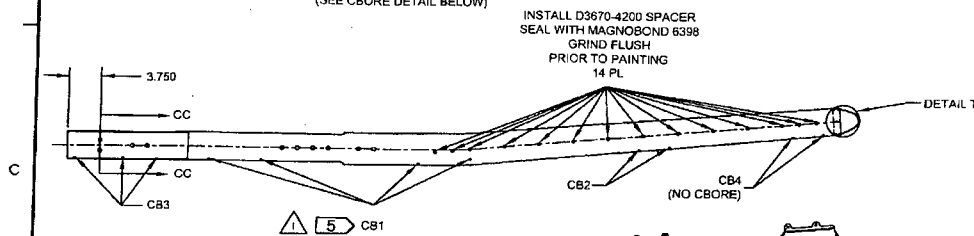
NOTE: Date & initial all entries

83275

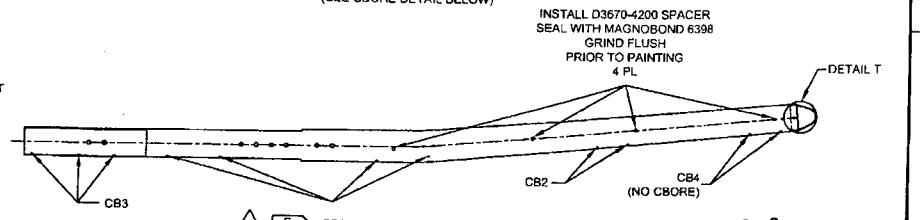


D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



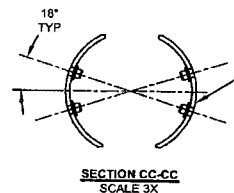
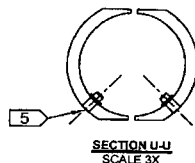
D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015-025 AFT TUBE ASSEMBLY PARTS LIST

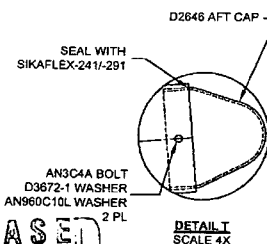
QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D2646	AFT CAP
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
1	1	D4095-049	WEARPAD
1	1	D4095-047	WEARPAD
1	1	D6014-090	AFT TUBE
14	14	AELS-1032-130	INSERT
8	8	AELS-1032-225	INSERT
4	4	ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	8	8	0.430 X 0.170	AELS-1032-225
CB2	4	4	0.430 X 0.170	AELS-1032-130
CB3	6	6	0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130



DRILL 0.391
CBORE 0.515 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL



RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO. D3391	REV. 1
MFG. APPR.		SHEET 8 OF 8	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 292

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Brendley Elliott
Job number: 83721
Part number: A3391-023
Description: Shield tube
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 12.05.01

Welder [Signature] Date of Test Coupon 12.05.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

